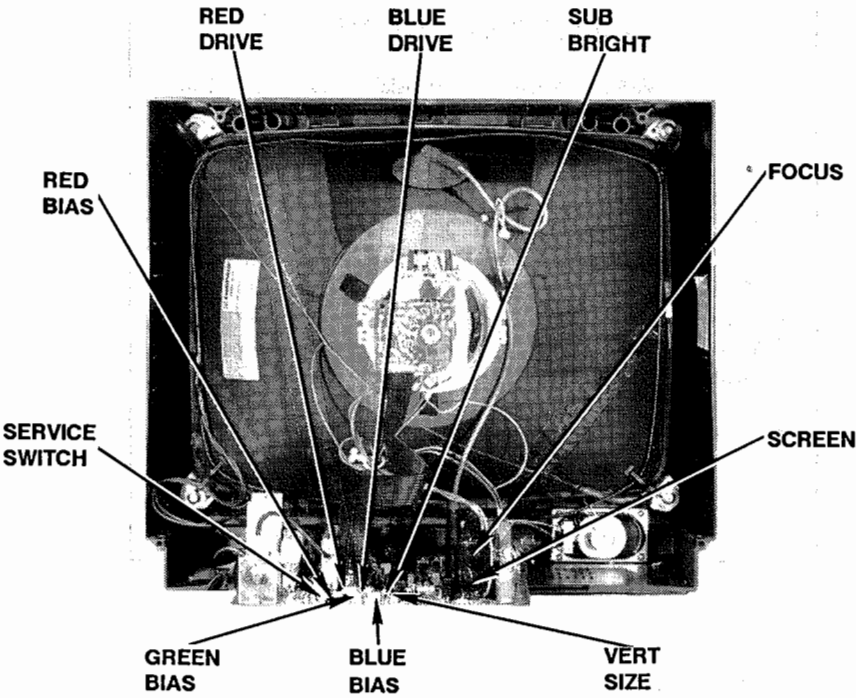


CABINET - REAR VIEW



TEST JIG HOOKUP				
Function	Chek-A-Color Adapter No.	PC Board Plug	Pin	Color
CRT	B239	# P401	1	Red
Yoke	D482		2	Blue
Yoke Setting	YP2A		3	Yellow
Comments	Focus Tap		4	Black

The listing of any available replacement part herein in no case constitutes a recommendation, warranty, or guarantee by Howard W. Sams & Company as to the quality and suitability of such replacement part. The numbers of the listed parts have been compiled from information furnished to Howard W. Sams & Company by the manufacturers of the specific type of replacement part listed.

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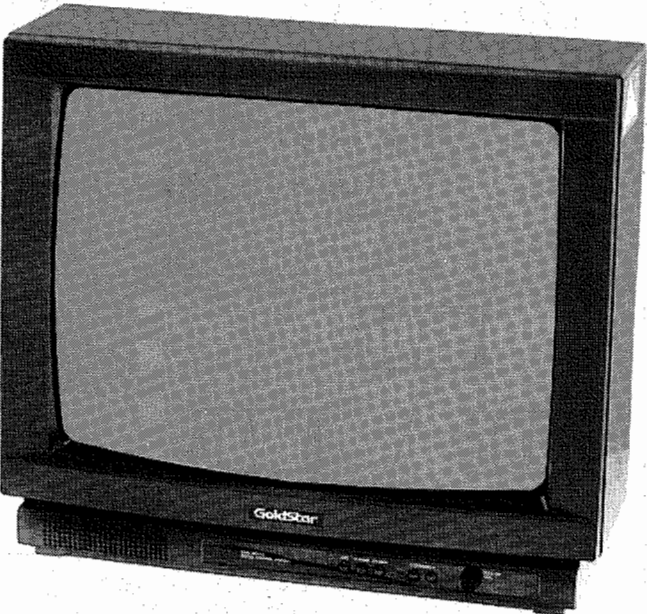
SET 2917

MODELS CMS-4841N/9841T/9841X

GOLDSTAR

GOLDSTAR

Models CMS-4841N, CMS-9841T, CMS-9841X
(Chassis NC-91A)



Model CMS-9841X

Essential coverage
for servicing a television receiver...

- Schematics
- Component locations
- Parts lists

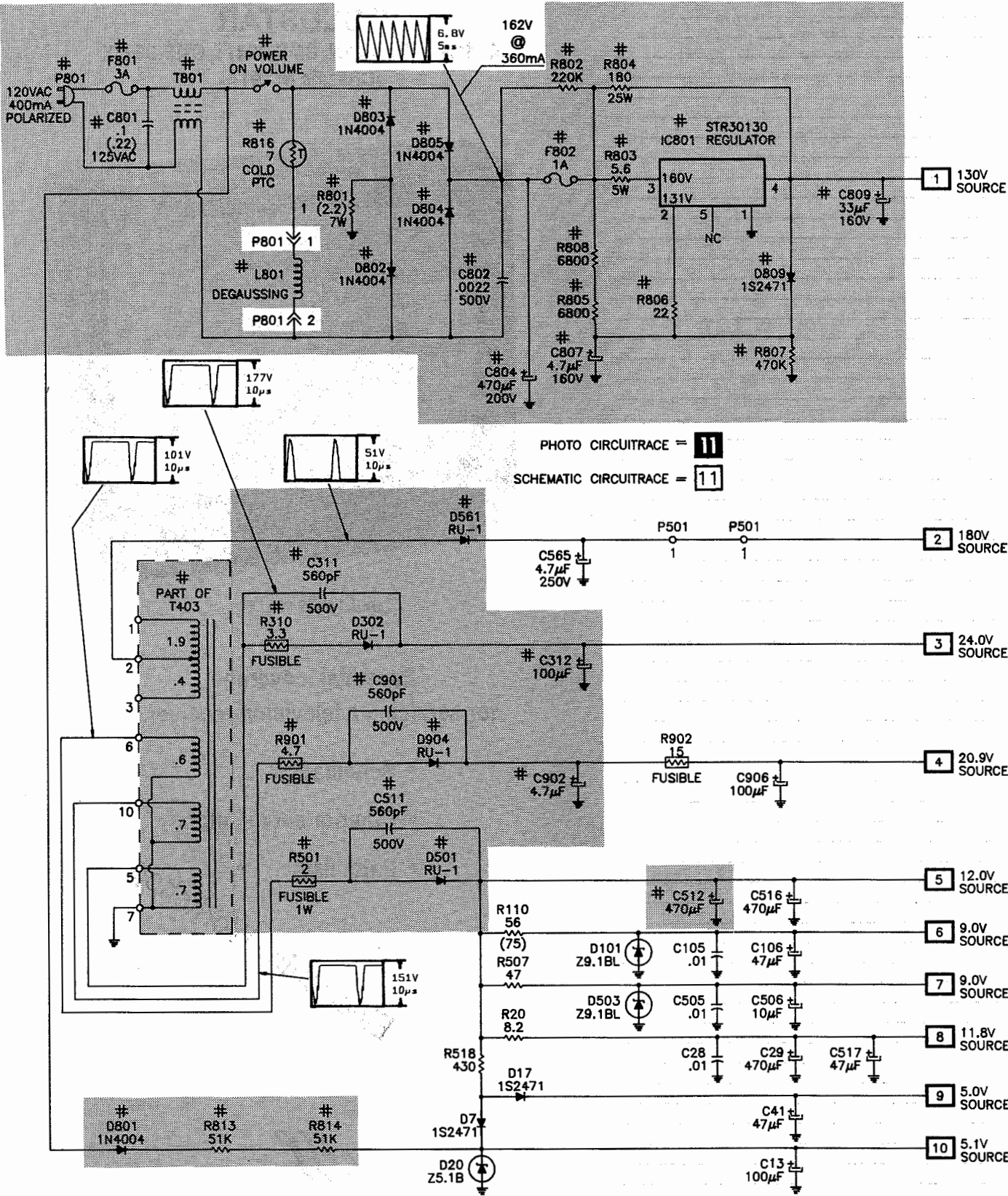


HOWARD W. SAMS & COMPANY

DECEMBER 1991 SET 2917

For Supplier Address,
See PHOTOFACT Annual Index

POWER SUPPLY SCHEMATIC

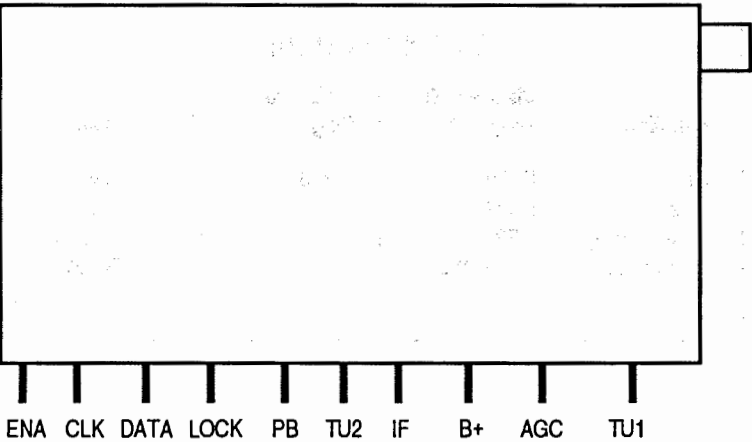


TUNER VOLTAGE CHART

	VHF Low Band	VHF High Band	UHF Band
TU1	1.2V	4.2V	1.2
AGC	6.9V	6.9V	6.9V
B+	11.8V	11.8V	11.8V
TU2	30V	30V	30V
PB	5.0V	5.0V	5.0V
LOCK	.08V	.08V	.08V
CLOCK	.4V	.4V	.4V
DATA	.4V	.4V	.4V
ENABLE	.4V	.4V	.4V

Note: VHF Low Band voltages taken on channel 2.
VHF High Band voltages taken on channel 7.
UHF Band voltages taken on channel 14.

TUNER TERMINAL GUIDE



PARTS LIST continued

MISCELLANEOUS

Item No.	Description	Mfr. Part No.	Notes
# F801	Fuse	131-033T	3A@125VAC
# F802	Fuse	131-033C	1A@125VAC
# L801	Degaussing Coil	150-276C	-
	Degaussing Coil	150-135G	Model CMS-4841N
# P801	AC Line Cord	174-060C	Polarized
SW1	Switch	140-248A	Ch +
SW2	Switch	140-248A	Ch -
SW4	Switch	140-248A	Ch Memo
SW5	Switch	140-248A	P-Mode
SW6	Switch	140-248A	APC
SW201	Switch	140-111A	Service
	Switch	140-111C	Service, Model CMS-9841T
# V501	CRT	A34KFC42	Model CMS-4841N
#	CRT	510UEB22	Model CMS-9841T
#	CRT	A48ACB12X	Model CMS-9841X
X1	Filter	166-235A	4.0MHz
X401	Filter	166-015N	-
X501	Crystal	156-001C	3.58MHz
Z101	Filter	166-234C	SAW
Z201	Delay Line	150-245D	-
Z251	Filter	166-031A	4.5MHz
Z601	Filter	166-003A	4.5MHz
	Filter	166-003D	4.5MHz, Model CMS-9841X
#	CRT Socket	381-094C	-
#	CRT Socket	381-100A	Model CMS-4841N
	PC Board (1)	110K33B	Main, Model CMS-4841N
	PC Board (1)	110-L13A	Main, Model CMS-9841X
	PC Board (1)	110-L13D	Main, Model CMS-9841T
	Tuner (1)	113-198C	TERH7X028A (FS120CH)

For SAFETY use only equivalent replacement part.

(1) Contact PTS Electronics Corporation for replacement; order by manufacturer's part number.



Created with pride by the
employees of Howard W. Sams
& Company.

J. Kocha, M. McDonald,
B. Buchanan, J. Young

CONTROLS

(All wattages 1/2 watt or less, unless otherwise listed.)

Item No.	Function	Resistance	Mfr. Part No.
VR1	Volume	10K	180-765A
	Volume (2)	10K	180-766A
VR151	AGC	10K	180-422H
VR301	Vert Size	10K	180-422H
VR505	3.58MHz VCO	20K	180-422J
	3.58MHz VCO (1)	22K	180-425J
VR561	Blue Drive	300	180-422B
VR565	Red Bias	5000	180-422G
VR571	Red Drive	300	180-422B
VR573	Green Bias	5000	180-422G
VR574	Blue Bias	5000	180-422G
VR575	Sub-Bright	2000	180-422E

(1) Model CMS-9841T
(2) Model CMS-9841N

CABINET PARTS

MODEL CMS-4841N

Item	Part No.
Cabinet Front	300-815C
Cabinet Rear	303-C72B
Knob, Volume/Power	440-790A
Button, Selection	441-118A

MODEL CMS-9841T

Item	Part No.
Cabinet Front	300-821T
Cabinet Rear	303-00042G
Knob, Volume/Power	440-791A
Button, Selection	441-117A

MODEL CMS-9841X

Item	Part No.
Cabinet Front	300-821A
Cabinet Rear	303-C77A
Knob, Volume/Power	440-791A
Button, Selection	441-116A

TEST EQUIPMENT

Test equipment listed by participating manufacturers illustrates typical or equivalent equipment used by Sams engineers to obtain measurements. This equipment is compatible with most types used by field service technicians.

Equipment	B&K Precision No.	SENCORE No.
Oscilloscope	1541A, 2120, 2125, 2160, 2190, 2522	SC61
Generators		
RGB	1249A, 1260	RG67
Multiburst Signal	1251, 1260	VA62A
Color Bar	1211A, 1249A, 1251, 1260	VA62A, CG25, NT64
TV Stereo	2009	ST65, ST66
Analog VOM	114, 117, 177, 214	-
Digital VOM	377, 388HD, 2700 Series, 2831A, 2860, 2900 Series	DVM37, DVM56A, SC61
Frequency Meter	1803A, 1804A, 1805, 1822, 1851, 1855	FC71, SC61
Hi-Voltage Probe	HV-44	HP200
VOM/DMM	-	TP212
Accessory Probes	PR-28(HV)	-
Isolation Transformer	TR110, 1604, 1653, 1655	PR57
Capacitance Analyzer	810A, 815, 820, 830	LC76, LC101, LC102
CRT Analyzer	480, 490	CR70
Temperature Probe	TP-28, TP-30	-
AC Leakage Tester	1655	PR57
Logic Probe	DP21, DP51	-
Logic Pulser	DP31, DP101	-
Inductance Analyzer	875A	LC76, LC101, LC102
Flyback Yoke Tester	875A	VA62A, LC76, LC101, LC102
TV Stereo Power Monitor	-	SR68
Field Strength Meter	-	FS73, FS74
Transistor Tester	510, 520B, 530	TF46
Video Analyzer	-	VA62A
Modulator/Converter	1201	-

COILS & TRANSFORMERS

Item No.	Function	Mfr. Part No.	On Unit No.	Russell Part No.
# DY1	90° Yoke (Horiz 2.32mH, Vert 31.5mH)	153-301A (1)	153-151G	-
#	Yoke	153-124B (2)	-	-
	Yoke	851-027E (3)	-	-
# T401	Horiz Drive	151-101B	-	-
# T403	Horiz Output	154-177C (1)	-	FBT-223
	Horiz Output	154-177H (2)	-	FBT-223
	Horiz Output	154-064C (3)	-	FBT-223

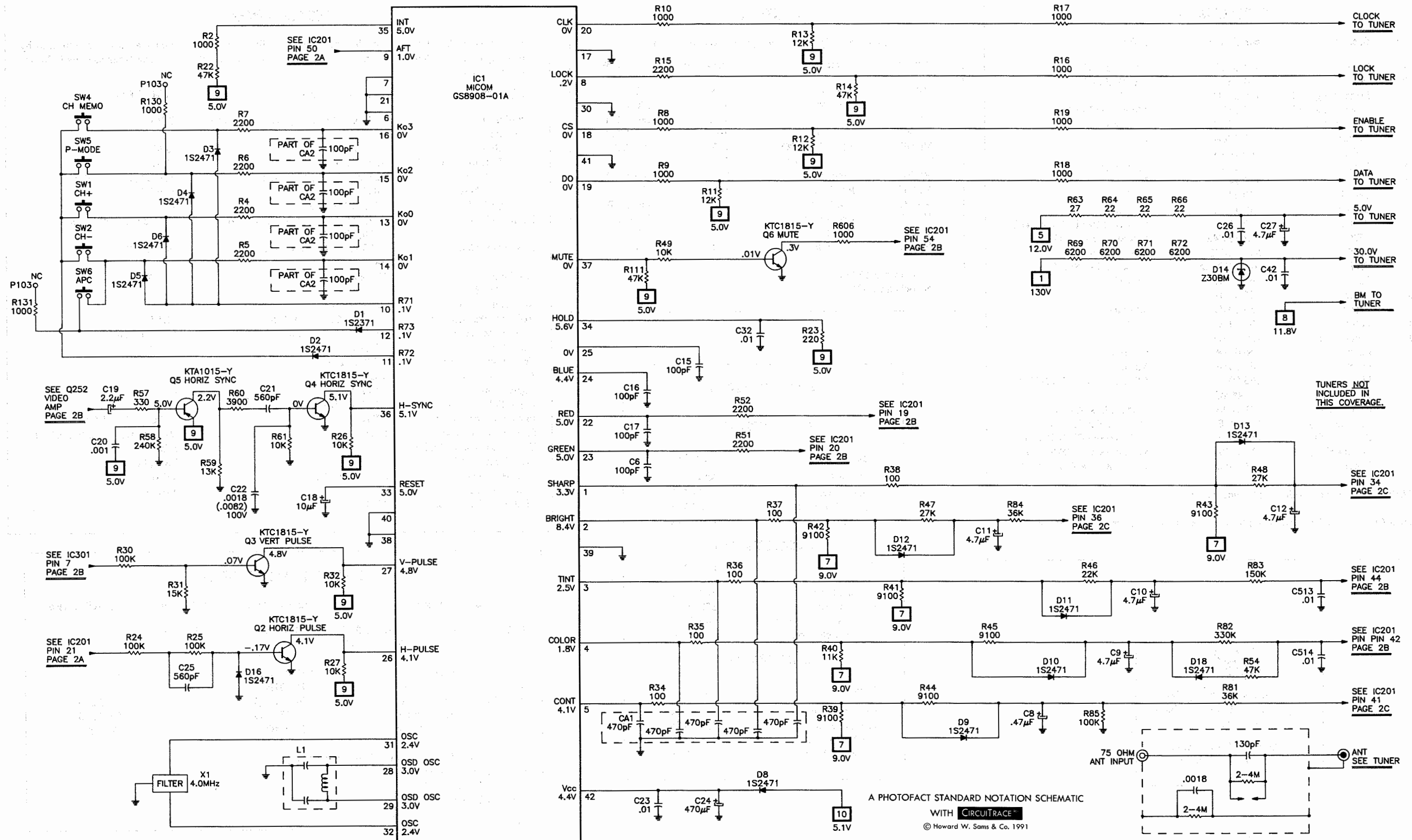
For SAFETY use only equivalent replacement part

(1) Model CMS-9841X
(2) Model CMS-9841T
(3) Model CMS-4841N

TUNER CONTROL SCHEMATIC

PHOTO CIRCUITTRACE = 11

SCHEMATIC CIRCUITTRACE = 11



PARTS LIST

Important Parts Information

- The parts listed here are those not usually available from a well-stocked supply cabinet or bin.
- Where items may be replaced with equivalent parts, several alternates are shown from participating vendors.
- On the parts lists, safety items are marked with a # to remind you that only exact replacements are recommended for these items.
- When ordering parts, state the model number, part number, and description.

Obtaining Parts

Many of these parts are available from your local Sams authorized distributor or the manufacturer of the equipment. Call Sams for the name of your nearest distributor:

800-428-7267

Or consult the Sams *Annual Index* for the address of the original equipment manufacturer.

Participating Vendors

Information on test equipment and replacement parts is listed in these pages for the following participating vendors. Consult the Sams *Annual Index* for their current address.

- B&K Precision
- Custom Components Corporation (Chek-A-Color)
- EVG / Russell Industries, Inc.
- GC-THORSEN
- NTE Electronics, Inc. (NTE)
- Philips ECG Company (ECG)
- PTS Electronics Corporation (PTS)
- Quam-Nichols Co. (Quam)
- Sencore, Inc.
- Thomson Consumer Electronics, Inc. (SK, TCE)

SEMICONDUCTORS

(Select replacement for best results.)

Item No.	Type No.	Mfr. Part No.	NTE Part No.	ECG Part No.	TCE Part No.
D1, 2, 5	1S2471	06200167	NTE519	ECG519	SK3100
D7 - D13	1S2471	06200167	NTE519	ECG519	SK3100
D14	Z30BM	06220242	NTE5035A	ECG5035A	SK30A
D16 - D18	1S2471	06200167	NTE519	ECG519	SK3100
D20	Z5.1B	06220227	NTE5010A	ECG5010A	SK5A1
D101	Z9.1BL	06220233	NTE5018A	ECG5018A	SK9A1
D201 - D204	1S2471	06200167	NTE519	ECG519	SK3100
D207	1S2471	06200167	NTE519	ECG519	SK3100
D301	1S2471	06200167	NTE519	ECG519	SK3100
D302	RU-1V	06200189	NTE552	ECG552	SK9000
D401	Z9.1BL	06220233	NTE5018A	ECG5018A	SK9A1
D402	1S2471	06200167	NTE519	ECG519	SK3100
# D471	RU-1V	06200189	NTE552	ECG552	SK9000
# D472	1S2471	06200167	NTE519	ECG519	SK3100
# D473	Z9.1BL	06220233	NTE5018A	ECG5018A	SK9A1
D501	RU-1V	06200189	NTE552	ECG552	SK9000
D503	Z9.1BL	06220233	NTE5018A	ECG5018A	SK9A1
# D561	RU-1V	06200189	NTE552	ECG552	SK9000
# D801	1N4002	06220069	NTE116	ECG116	SK3311
# D802 - D805	1N4004	06220071	NTE116	ECG116	SK3312
# D809	1S2471	06200167	NTE519	ECG519	SK3100
D902	1S2471	06200167	NTE519	ECG519	SK3100
D904	RU-1V	06200189	NTE552	ECG552	SK9000
IC1	GS8908-01A	06300778	-	-	-
IC201	TA8680N	06300763	NTE7010	ECG7010	-
IC301	LA7830	06300360	NTE1773	ECG1773	SK9752
IC801	STR30130	06300629	NTE1777	ECG1777	SK9870
Q2 - Q4	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120169	NTE85	ECG85	SK9229
Q5	KTA1015Y	-	NTE290A	ECG290A	SK9132
	KTA1015-Y	06100084	NTE290A	ECG290A	SK9132
Q6	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120169	NTE85	ECG85	SK9229
Q101	KTC388A	06120025	NTE85	ECG85	SK3132
Q201	KTA562A	-	NTE290A	ECG290A	SK3114A
	KTA562TM-Y	06100082	NTE290A	ECG290A	SK3114A
Q202	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120169	NTE85	ECG85	SK9229
Q252	KTA1015Y	-	NTE290A	ECG290A	SK9132
	KTA1015-Y	06100084	NTE290A	ECG290A	SK9132
Q401	KTC2482	06120218	NTE399	ECG399	SK3244
# Q402	2SD1554	06170028	NTE2302	ECG2302	SK9422
	2SD1555	06130134	NTE2331	ECG2331	SK9422
Q561 - Q563	KTC2482	06120218	NTE399	ECG399	SK3244
Q901	KTC2120Y	-	NTE289A	ECG289A	SK3849
	KTC2120-Y	06120174	NTE289A	ECG289A	SK3124A
Q902	KTA950Y	-	NTE294	ECG294	SK3841
	KTA950-Y	06100086	NTE294	ECG294	SK3841
Q903	KTC1815Y	-	NTE85	ECG85	SK3124A
	KTC1815-Y	06120169	NTE85	ECG85	SK9229

For SAFETY use only equivalent replacement part.

ELECTROLYTIC CAPACITORS

Models CMS-4841N, CMS-9841X

Item	Rating	Mfr. Part No.
# C312	100 35V	181-081G
# C407	1 160V	02141807
# C411	1 250V	02140807
# C471	33 25V	02140416
# C472	4.7 16V	02140311
# C512	470 16V	02140323
C565	4.7 250V	02140811
# C804	470 200V	181-075E
# C807	4.7 160V	02140711
# C809	33 160V	181-102F
# C902	4.7 50V	02140511

For SAFETY use only equivalent replacement part.

ELECTROLYTIC CAPACITORS

Model CMS-9841T

Item	Rating	Mfr. Part No.
# C312	100 35V	181-081G
# C407	1 160V	08110707
# C411	1 250V	08110807
# C471	33 25V	08110416
# C472	4.7 16V	08110311
# C512	470 16V	02140323
C565	4.7 250V	02140811
# C804	470 200V	181-075E
# C807	4.7 160V	02140711
# C809	33 160V	181-102F
# C902	4.7 50V	08110511

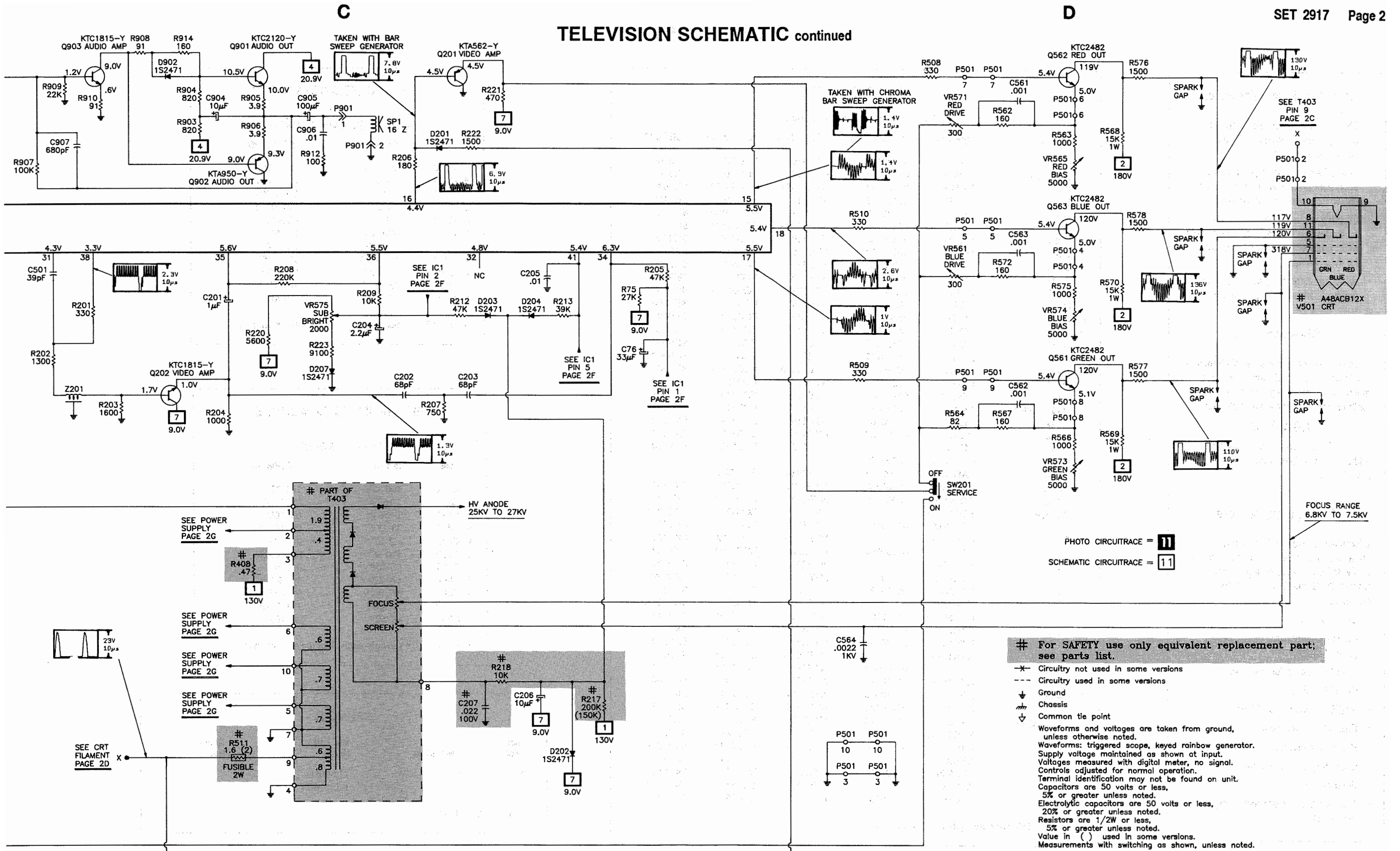
For SAFETY use only equivalent replacement part.

SPEAKER

Item No.	Description	Mfr. Part No.	Quam Part No.
SP1	16 Ohm 1.5W	120-063D	-
	-	120-116B (1)	-

(1) Model CMS-4841N

TELEVISION SCHEMATIC continued



PARTS LIST continued

CAPACITORS

Models CMS-4841N, CMS-9841X

Item	Rating	Mfr. Part No.
CA1	470 X 5	167-108A
C22	.0082 100V 10% (1)	02705322
	.0018 100V 5% (2)	08702422
C155	.056 100V 10%	02700117
# C207	.022 100V 10%	02705333
C251	.1 100V 10%	02705337
# C308	.1 100V 10%	02705337
# C311	560 500V 10%	02201054
C402	.01 100V 10%	02705331
# C403	47 50V 10%	02300128
# C406	220 10% (1)	02200744
	220 5% (2)	08201044
C408	560 500V 10%	02201054
# C412	.0047 10%	02200768
# C414	.006 1.6KV 5% (1)	181-131S
	.0068 1.6KV 5% (2)	181-131A
# C417	.27 200V 5% (1)	181-059K
	.39 200V (2)	181-128C
C502	.022 100V 10%	02705333
C507	.1 100V 10%	02705337
# C511	560 500V 10%	02201054
C515	.018 100V 10%	02700118
C564	.0022 1KV 10%	02201364
C605	.0068 100V 10%	02705329
# C801	.1 125VAC (1)	181-062D
	.22 100V (2)	181-062J
# C802	.0022 500V 10%	02201064
# C901	560 500V 10%	02201054

For SAFETY use only equivalent replacement part.
 (1) Model CMS-4841N
 (2) Model CMS-9841X

CAPACITORS

Model CMS-9841T

Item	Rating	Mfr. Part No.
CA1	470 X 5	167-108A
C22	.0018 100V 5%	08702422
C155	.056 100V 10%	02700117
# C207	.022 100V 10%	08702433
C251	.1 100V 10%	08700337
# C308	.1 100V 10%	08700337
# C311	560 500V 10%	08201054
C402	.01 100V 10%	08702431
# C403	47 500V 10%	08300128
# C406	220 10%	08201044
C408	560 500V 10%	08201054
# C412	.0047 50V 10%	08200768
# C414	.0082 1.6KV 5%	181-131B
# C417	.39 200V 5%	181-128C
C502	.022 100V 10%	08702433
C507	.1 100V 10%	08700337
# C511	560 500V 10%	08201054
C515	.018 100V 10%	02700118
C564	.0022 1KV 10%	02211364
C605	.0068 100V 10%	08700329
# C801	.22 125VAC	181-354K
# C802	.0022 500V 10%	02211064
# C901	560 500V 10%	08201054

For SAFETY use only equivalent replacement part.

COILS (RF-IF)

Item No.	Rating	Mfr. Part No.
L1	Osc (6.5MHz)	150-564A
L101	RF Choke (.79mH)	150-167E
L103	AFT	150-164B
L181	AFT	150-651A
L251	Peaking (15uH)	04512245
# L403	Peaking (180mH)	150-1091
# L404	Linearity	150-159K
#	Linearity	150-159J (1)
L601	Sound IF	150-651B
L602	Peaking (27uH)	04512251
# T801	Line Filter	150-151A

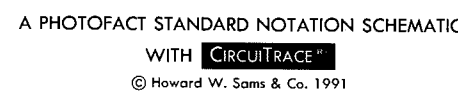
For SAFETY use only equivalent replacement part.
 (1) Model CMS-4841N

RESISTORS

Item No.	Rating	Mfr. Part No.	NTE Replacement
# R217	200K 5% 1/2W Carbon Film	01154152	HW420
	150K 5% 1/2W Carbon Film (1)	01154149	HW415
# R218	10K 5% 1/6W Carbon Film	01165121	-
# R308	430 5% 1/6W Carbon Film	01154088	-
# R310	3.3 5% 1/2W Fusible	180-286G	-
# R404	180 5% 1/6W Carbon Film	01165079	-
# R408	.47 5% 1/2W Metal Film	01516017	HW447
# R413	100 5% 1/2W Fusible	180-140U	-
# R425	3900 5% 1/2W Metal Oxide	01325111	HW239
# R426	3900 5% 1/2W Metal Oxide	01325111	HW239
# R427	3900 5% 1/2W Metal Oxide	01325111	HW239
# R428	3900 5% 1/2W Metal Oxide	01325111	HW239
# R472	2200 5% 1/2W Carbon Film	01165105	HW222
# R473	3300 5% 1/6W Carbon Film	01165109	-
# R474	2000 5% 1/6W Carbon Film	01165104	-
	2700 5% 1/6W Carbon Film (1)	01165107	-
# R501	2 5% 1W Fusible	180-1404	F1W2D0
# R511	1.6 5% 2W Fusible	180-119D	F1W1D6
	2 5% 2W Fusible (1)	180-140r	F1W2D0
R568	15K 5% 1W Metal Oxide	01332125	1W315
R569	15K 5% 1W Metal Oxide	01332125	1W315
R570	15K 5% 1W Metal Oxide	01332125	1W315
# R801	2.2 5% 7W WW	180-329B	-
	1 5% 7W WW (2)	180-344A	-
# R802	220K 5% 1/2W Carbon Film	01154153	HW422
# R803	5.6 5% 5W WW	180-142K	-
# R804	180 5% 25W WW	180-344Q	25W118
# R805	6800 5% 1/2W Metal Oxide	01325117	HW268
# R806	22 5% 1/2W Metal Oxide	01325057	HW022
# R807	470K 5% 1/2W Carbon Film	01154161	HW447
# R808	6800 5% 1/2W Metal Oxide	01325117	HW268
# R813	51K 5% 1/2W Metal Oxide	01325138	HW315
# R814	51K 5% 1/2W Metal Oxide	01325138	HW315
# R816	Thermistor	163-007A	-
# R901	4.7 5% 1/2W Fusible	180-286E	-
R902	15 5% 1/2W Fusible	180-286Z	-

For SAFETY use only equivalent replacement part.
 (1) Model CMS-9841T
 (2) Model CMS-9841X

B



SAFETY PRECAUTIONS

SERVICE WARNING

ONLY qualified service technicians who are familiar with safety checks and guidelines should perform service work. For continued SAFETY:

- 1. Before replacing parts, disconnect power source to protect electrostatically sensitive parts.
- 2. Do not attempt to modify any circuit unless so recommended by the manufacturer.
- 3. When servicing chassis, use an isolation transformer between the line cord and power receptacle.

SERVICING HIGH VOLTAGE AND PICTURE TUBE

Use EXTREME CAUTION when servicing the High Voltage circuits.

- 1. To discharge static High Voltage, connect a 10-kilohm resistor in series with a test lead between chassis and picture tube anode lead.
- 2. DO NOT lift picture tube by the neck.
- 3. ALWAYS wear shatterproof goggles when handling picture tube to protect eyes in case of implosion.

X-RAY RADIATION AND HIGH VOLTAGE LIMITS

Be aware of the instructions and procedures covering x-ray radiation. In solid-state receivers and monitors, the picture tube is the only potential source of x-rays.

- 1. Keep an accurate High Voltage meter available at all times. Check meter calibration periodically.
- 2. Whenever servicing a chassis, check High Voltage at various brightness levels to be sure it is regulating properly.
- 3. Keep High Voltage at rated value, NO HIGHER. Excessive High Voltage may cause x-ray radiation or failure of associated components. DO NOT depend on protection circuits to keep voltage at rated value.
- 4. When troubleshooting a set with excessive High Voltage, avoid close contact with picture tube. DO NOT operate set longer than necessary. To locate the cause of excessive High Voltage, use a variable AC transformer to regulate voltage.
- 5. In present chassis, many electrical and mechanical components have safety-related characteristics which are not detectable by visual inspection. Such components are identified by a # on both the schematic and the parts list. For SAFETY, use only equivalent replacement parts when replacing these components.

SAFETY CHECKS – FIRE AND SHOCK HAZARD

Cold Leakage Checks for Sets with Isolated Ground

- 1. Unplug the AC cord, connect a jumper across the plug prongs, and turn the power switch ON.
- 2. Use an ohmmeter to measure the resistance between the jumpered AC plug and any exposed metal cabinet parts such as antenna screw heads, control shafts, or handle brackets. Exposed metal parts with a return path should measure between 200 kilohms and 5 megohms. Parts without a return path must register infinity.

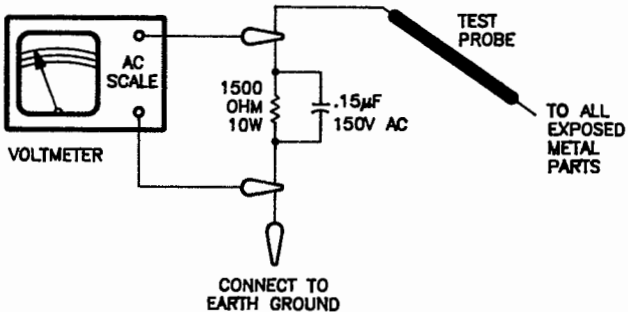
Hot Leakage Current Check

- 1. Plug the AC cord directly into AC outlet. DO NOT use an isolation transformer.
- 2. Use a 1500-ohm, 10-watt resistor in parallel with a .15-microfarad 150-volt AC capacitor to connect between any exposed metal parts on the set and a good earth ground. (See figure below.)
- 3. Use an AC voltmeter with at least 1000 ohms-per-volt sensitivity to measure the voltage across the resistor. Check all exposed metal parts and measure voltage at each point.
- 4. Voltage readings should not exceed .75 volts RMS (5 milliamps AC). Any value exceeding this limit constitutes a potential shock hazard and must be corrected.
- 5. If AC plug is not polarized, reverse the AC plug and repeat exposed metal part voltage measurement at each point.

GENERAL GUIDELINES

Perform a final SAFETY CHECK before returning set to customer.

- 1. Check repaired area for poorly soldered or de-soldered connections, and check entire circuit board for solder splashes.
- 2. Check inner board wiring for pinched wires or wires contacting any high-wattage resistors.
- 3. Check that all control knobs, shields, covers, grounds and mounting hardware have been replaced. Be sure to replace all insulators and restore proper lead dress.



ADJUSTMENT & ALIGNMENT TOOLS

Item No.	GC-Thorsen Tool No.
L1, L103, L181, L601,	9440
VR151, VR301, VR561, VR565, VR571, VR573, VR574, VR575	8276

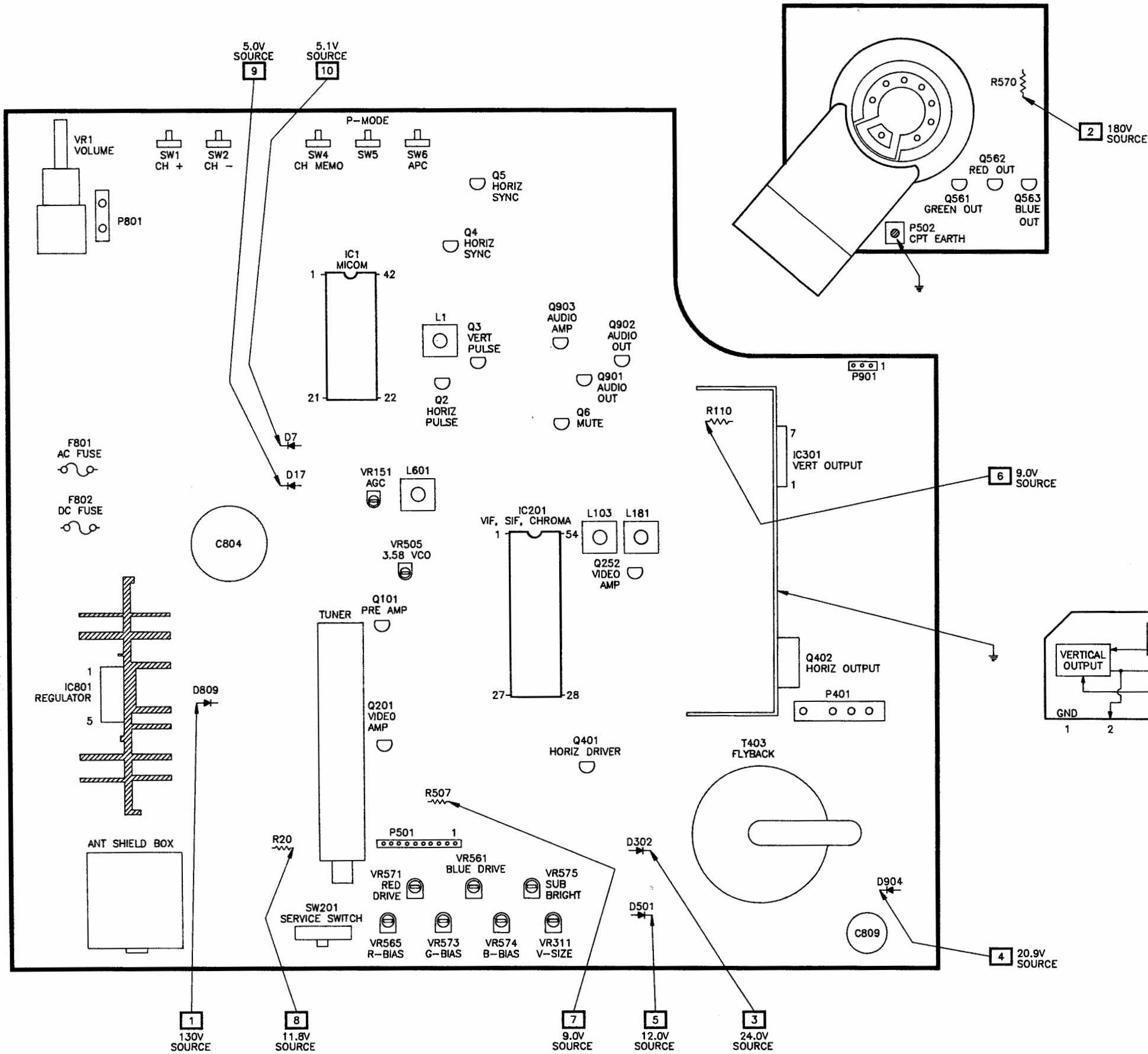
HIGH VOLTAGE SHUTDOWN TEST

Momentarily apply 11.0VDC to the anode of D472. The set should go into shutdown and remain in shutdown. To restore normal operation, remove power for 30 seconds. If the set does not go into shutdown, troubleshoot the Fail - Safe Circuit to correct the problem.

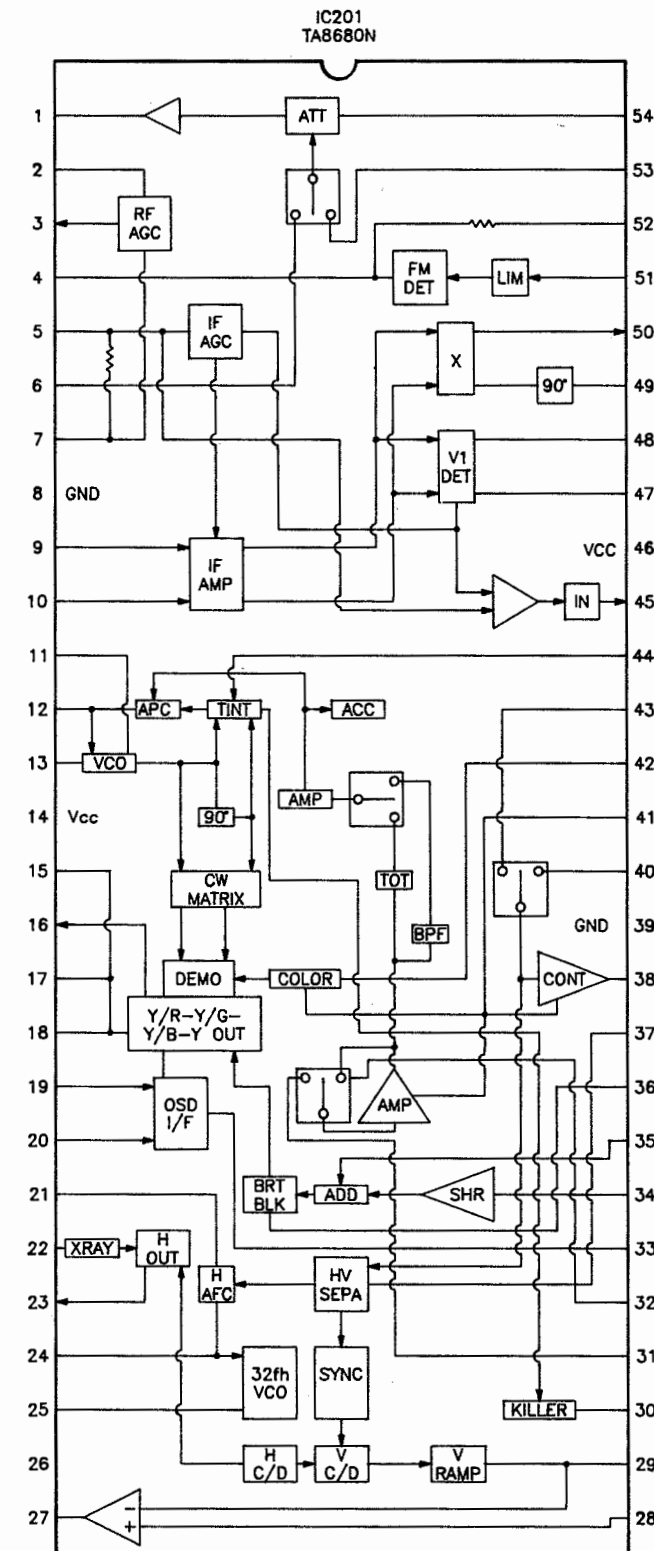
NOTES

1. *Phragmites australis* (Cav.) Trin. ex Steud.

PLACEMENT CHART



IC FUNCTIONS



GOLDSTAR
MODELS CMS-4841N/9841T/9841X

